# THE BROADBAND TRIFECTA
## CONNECTING RHODE ISLANDERS

Project Funded by the
American Recovery and Reinvestment Act
Broadband Technology Opportunities Program

STATE of RHODE ISLAND

HOPE

The National Telecommunications and Information Administration is an agency in the U.S. Department of Commerce that serves as the executive branch agency principally responsible for advising the President on telecommunications and information policies. In this role, NTIA frequently works with other Executive Branch agencies to develop and present the Administration's position on these issues. Since its creation in 1978, NTIA has been at the cutting edge of critical issues. In addition to representing the Executive Branch in both domestic and international telecommunications and information policy activities, NTIA also manages the Federal use of spectrum; performs cutting-edge telecommunications research and engineering, including resolving technical telecommunications issues for the Federal government and private sector; and administers infrastructure and public telecommunications facilities grants.

**Broadband Technology Opportunities Program (BTOP)**

NTIA administers the Broadband Technology Opportunities Program (BTOP) within three project categories:

• Comprehensive Community Infrastructure:
*(OSHEAN Grant, Page 6)*
Projects to deploy new or improved broadband Internet facilities (e.g., laying new fiber-optic cables or upgrading wireless towers) and to connect "community anchor institutions" such as schools, libraries, hospitals, and public safety facilities. These networks help ensure sustainable community growth and provide the foundation for enhanced household and business broadband Internet services.

• Public Computer Centers:
*(Ocean State Libraries Grant, Page 8)*
Projects to establish new public computer facilities or upgrade existing ones that provide broadband access to the general public or to specific vulnerable populations, such as low-income individuals, the unemployed, seniors, children, minorities, and people with disabilities.

• Sustainable Broadband Adoption:
*(Broadband Rhode Island Grant, Page 10)*
Projects that focus on increasing broadband Internet usage and adoption, including among vulnerable populations where broadband technology traditionally has been underutilized. Many projects include digital literacy training and outreach campaigns to increase the relevance of broadband in people's everyday lives.

In the long term, these Recovery Act investments will help bridge the digital divide, improve access to education and healthcare services, and boost economic development for communities held back by limited or no access to broadband – communities that would otherwise be left behind.

**Connecting America: The National Broadband Plan,** unveiled March 16, 2010, is a Federal Communications Commission (FCC) plan required by the American Recovery and Reinvestment Act of 2009 for improving broadband Internet access throughout the United States. Its goal is providing 100 million American households with access to 100 Mbit/s (megabits per second) connections – as much as 20 times faster than what is generally available in 2010 – by 2020. In order to "ensure every American has access to broadband capability," the purpose of the plan is to "include a detailed strategy for achieving affordability and maximizing use of broadband to advance consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, employee training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes."

**To Learn More About The National Broadband Plan, Please Visit: www.broadband.gov**

On Feb. 13, 2009, Congress passed the American Recovery and Reinvestment Act of 2009 at the urging of President Obama, who signed it into law four days later. A direct response to the economic crisis, the Recovery Act has three immediate goals: Create new jobs and save existing ones, Spur economic activity and invest in long-term growth, Foster unprecedented levels of accountability and transparency in government spending.

The Recovery Act intends to achieve those goals by: Providing $288 billion in tax cuts and benefits for millions of working families and businesses, Increasing federal funds for education and health care as well as entitlement programs (such as extending unemployment benefits) by $224 billion, Making $275 billion available for federal contracts, grants and loans, Requiring recipients of Recovery funds to report quarterly on how they are using the money. All the data is posted on Recovery.gov so the public can track the Recovery funds.

Construction and repair of roads and bridges as well as scientific research and the expansion of broadband and wireless service are also included among the many projects that the Recovery Act will fund.

While many of Recovery Act projects are focused more immediately on jumpstarting the economy, others, especially those involving infrastructure improvements, are expected to contribute to economic growth for many years.

Founded in 1999, OSHEAN is a non-profit coalition of universities, hospitals, government agencies, and other non-profit organizations dedicated to providing innovative Internet-based technology solutions for its member institutions and the communities they serve.

OSHEAN is an active member of the Rhode Island technology community, contributing expertise and resources to a wide range of initiatives, from school enrichment activities to community forums on technology-related issues in the public interest. OSHEAN regularly pursues opportunities for local, regional and national collaboration and plays a national leadership role in professional education for IT professionals and policy development in the information technology arena.

OSHEAN is dedicated to building, through the use of innovative practices, a communications infrastructure that will serve the needs of Rhode Island's institutions of higher education, state and federal government agencies, non-profit research organizations, workforce development initiatives, and economic development efforts now and in the future. OSHEAN is committed to developing network expertise among its member organizations and to creating an environment that encourages collaboration through shared resources, information and expertise.

Ocean State Libraries is a consortium dedicated to serving the Rhode Island community by sharing materials, services, and electronic resources.

It is incorporated as a non-profit organization under the Internal Revenue Code (501c3). As of 2007, there were 49 public library systems operating from 73 locations, and one school library. All RI residents have access to a OSL library in their own communities.

OSL was founded in 1982 as the Cooperating Libraries Automated Network (CLAN) for the purpose of sharing a single library automation system with a common patron database for circulation of library materials. In the ensuing twenty-five years, OSL has grown dramatically. In addition to the circulation system, OSL now offers a shared MARC bibliographic database, an on-line public access catalog, inter-library loan through system-wide holds (reserves), a consortium-wide telecommunications network with Internet access, and on-line access to periodical indexes and full-text databases. OSL uses the RINET communications network to connect to the Internet. OSL also uses the LORI delivery system of OLIS to carry library materials among its members. In 2007, CLAN changed its name to Ocean State Libraries.

In the beginning, OSL was managed almost entirely by the Providence Public Library. Since incorporating in 1993, the management and policy making functions of OSL have passed from Providence to the general OSL membership.

Funding for most OSL computer and telecommunications equipment has been generously supplied by the Champlin Foundations. OSL's operating budget comes entirely from fees paid by its members.

Broadband Rhode Island (BBRI), an initiative of the Rhode Island Economic Development Corporation (RIEDC), is funded through December 2014 by the State Broadband Data and Development Grant Program (SBBD) as part of the American Recovery and Reinvestment Act of 2009 (ARRA) RIEDC was awarded a total of $4.52M. The initiative focuses on broadband mapping and broadband planning in the State of Rhode Island. BBRI plans to address public awareness and education about broadband; and to study and develop plans to increase adoption rate and broadband usage across all aspects of our lives including in our homes, schools, businesses, libraries, healthcare facilities, public safety and government.

Rhode Island is already ahead of the curve in terms of Internet speed and coverage, with one of the fastest and highest quality broadband infrastructures in the United States. While the promise of broadband is great for the Ocean State, broadband has not fully been adopted by all Rhode Islanders. Of those Rhode Islanders that have broadband, 32 percent of households have Internet speeds that are below minimum national standards of 4 Mbps. (Source: Speed Matters, Communications Workers of America, November 2010). We need to do better. Along with the rest of the nation, we're competing in a global economy where innovation and knowledge are primary drivers of economic growth. There is little doubt that high-speed and ubiquitous Internet access is an economic development necessity for all industries. Rhode Island is building on its broadband foundation and supports the national agenda to increase broadband access and adoption through better data collection and broadband planning.

## OSHEAN RECEIVES $21.7M FEDERAL STIMULUS GRANT

The National Telecommunications & Information Administration's (NTIA) recent initiative – the Broadband Technology Opportunity Program (BTOP) – sought to expand broadband by ensuring that non-profit institutions could obtain the broadband capacity they need at an affordable rate. In September 2010, OSHEAN received the American Recovery & Revitalization Act (ARRA) Federal BTOP stimulus grant for $21,739,183. The grant will be used to bring vastly increased broadband capacity to Community Anchor Institutions (CAIs) in Rhode Island and Bristol County, Massachusetts. OSHEAN will apply an additional $10.7M in private matching funds to address the dilemma these CAIs face; having the greatest demand for bandwidth, with the least ability to pay for it.

The Broadband Technology Opportunity Program (BTOP) grant will build a 339-mile fiber optic network to include every county in Rhode Island and neighboring Bristol County, Massachusetts. The OSHEAN Beacon 2.0 network, as it is called, will bring fiber optic cable to over 50 community anchor institutions and provide improved access to hundreds of Rhode Island schools and libraries - potentially 383 K-12 schools and 72 libraries - through the Rhode Island Network for Educational Technology (RINET).

Consortiums like OSHEAN (called statewide networks or "state nets"), exist in over 30 states and focus on delivering technology capabilities to non-profit industries. While Rhode Island has a competitive telecommunications services market, delivering technology solutions is not only about the services offered, but the mission of organizations providing innovative solutions for its member institutions and the communities they serve.

"Our members have been working together for almost a decade on ways to provide for the advanced broadband needs of our colleges, universities, hospitals, courts, state and local governments, and schools and libraries. This grant will ensure our region's students have data speeds that are second to none, and that we have a key piece of infrastructure for our emerging knowledge economy," said George Loftus, President & CEO of OSHEAN.

OSHEAN's dedicated fiber optic network will have an initial capacity of 400 Gbps. It will allow schools and libraries to connect 50 times faster than the speeds being offered to homes in Rhode Island. Researchers at universities such as Brown University, University of Rhode Island, or the University of Massachusetts Dartmouth, and hospitals will each connect at 10 Gbps. These ultra-high speeds are critical for moving digital images and for gaining access to high performance computers used in research. The institutions will be able to better serve their respective communities with faster data transfer and connectivity speeds at affordable rates.

In addition to the American Recovery & Revitalization Act (ARRA) Federal Broadband Technology Opportunities Program (BTOP) stimulus grant, OSHEAN was awarded in February 2010, a $1.245 million Recovery award, which provided over 600 computers/printers and 10 mobile computing centers to Ocean State Libraries – an organization comprised of nearly every public library in Rhode Island. OSHEAN's dedicated fiber optic network will enable Ocean State Libraries to provide patrons with an enhanced experience of library computers for educational, developmental or personal purposes.



(OSHEAN Board of Directors, OSHEAN President & CEO, Rhode Island Federal Delegation, and State and Local Government Represenation)

*In celebration of the American Recovery & Revitalization Act (ARRA) Federal Broadband Technology Opportunities Program (BTOP) $21.7M stimulus grant, OSHEAN hosted a kickoff event on October 18th, 2010, at the Roger Williams Park Botanical Garden Center in Providence, Rhode Island. The event brought out the likes of OSHEAN members from its higher education, health care and government institutions, as well as Rhode Island's Federal delegation including Senators Jack Reed and Sheldon Whitehouse, and Congressman Jim Langevin. Lieutenant Governor Elizabeth Roberts and U.S. House of Representative David Cicilline (formerly the Mayor of Providence) represented Rhode Island State and Local Government.*

## BEACON 2.0 PROJECT PARTICIPANTS

- *Brown University*
- *Care New England*
- *CharterCARE*
- *City of Providence*
- *Community College of Rhode Island*
- *Lifespan*
- *Narragansett Indian Tribe*
- *New England Institute of Technology*
- *Providence Community Health Centers*
- *Rhode Island Administrative Office of State*
- *Rhode Island Division of Information Technology*
- *Rhode Island Network for Educational Technology (RINET)*
- *Roger Williams University*
- *Salve Regina University*
- *South County Hospital*
- *Taunton Municipal Lighting Plant*
- *United States Naval War College*
- *University of Massachusetts Dartmouth*
- *University of Rhode Island*
- *Westerly Hospital*

## OSHEAN Beacon 2.0 BTOP Key Facts:
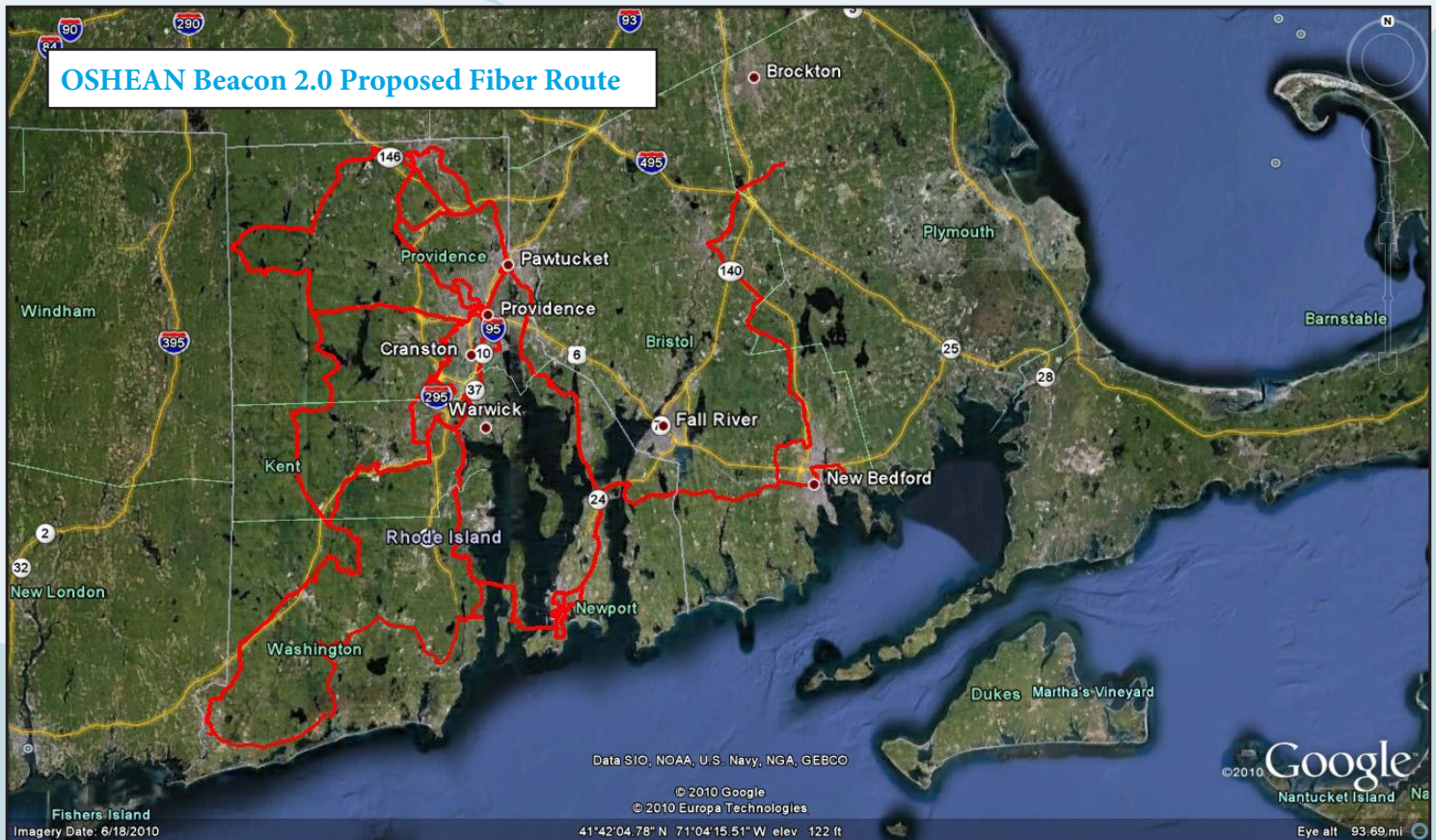
*$21.7M federal stimulus*

*$10.7M in private investment*

*210 jobs created*

*339-mile new fiber optic network in all 5 counties in Rhode Island and Bristol County, Massachusetts*

*Over 50 community anchor institutions connected to a dedicated optical network*

*Greater broadband capacity for schools, hospitals, libraries and government agencies at lower costs*



**OSHEAN Beacon 2.0 Proposed Fiber Route**

## To Learn More, Please Visit: www.oshean.org

*The Broadband Trifecta: Connecting Rhode Islanders*

## OCEAN STATE LIBRARIES AND OSHEAN AWARDED $1.2M FEDERAL STIMULUS GRANT TO FUND 600 NEW LIBRARY COMPUTERS AND MOBILE COMPUTER CENTERS

In February 2010, Ocean State Libraries (OSL), in partnership with OSHEAN, was the sub-recipient of a Federal Broadband stimulus grant awarded by the National Telecommunications and Information Administration (NTIA). The $1.245 million grant will provide over 600 computers and printers for public service and public access. Onehundred new laptops, equipped with Internet connections will be used to establish twelve mobile computing labs that will be housed and shared at various library locations. In addition, the grant will provide central libraries and their branches with new state-of-the-art routers and switches, ensuring that each site will have upgraded bandwidth capabilities.

The grant, awarded as part of the Federal Broadband Technology Opportunities Program (BTOP) will expand the libraries' capacities to offer public-use of personal computers, enable expanded employment training and workshops, and provide streaming, video conferencing and an archiving ability that will allow libraries to offer classes in one location while sharing content at another. "Being able to simulcast our programming from one library to others and to archive sessions so they can be reviewed later or seen by someone who cannot attend the scheduled classes brings great economies of scale to the efforts in our libraries and brings broader access to our citizens," said Lisa Davis, OSL Assistant Director.

It has been estimated that over 36,000 library patrons will utilize the newly upgraded computers each week. Bi-lingual trainers will enable libraries to provide workshop training opportunities to a large part of the community; more so than ever before. Before the grant award, library branches used public computers for class training sessions. This limited and often interfered with the allotted amount of time available for community members to use the computers. Now, with the new mobile labs, branches can hold classes when and where they want without disturbing a patron's computer time.

"Receiving the BTOP stimulus grant represents an unprecedented opportunity for the citizens of Rhode Island," said Joan E. Gillespie, OSL Executive Director. "We are also very grateful to the state Office of Library and Information Services for their help and to the Champlin Foundations for providing matching funds for this grant and for their ongoing support of RI libraries. They have truly built the backbone of library technology in Rhode Island."

In times of library funding cuts, these grant awards will strengthen the libraries' abilities to serve the citizens of Rhode Island better than ever.

# FAST FACTS

OSL operates with an annual budget of $1.6 million derived from local support

More than 1.5 million items annually are sent through the state-wide interlibrary loan system by OSL libraries

All public libraries have high-speed Internet access through the OSL network

The 50 library systems in OSL offer access to a combined total of 4.5 million items

Over 6.9 million items per year are borrowed from member libraries

There are over 520,000 registered OSL library card holders

**To Learn More, Please Visit: www.oslri.org**

# BBRI
## Broadband Rhode Island

*An initiative of the RIEDC*

*Creating new opportunities by expanding broadband use and literacy across Rhode Island*

## THE PROMISE OF BROADBAND

Broadband, also referred to as high-speed Internet, is a critical engine for communities to enhance social and economic well-being by serving as a vital resource to help educate our youth, create jobs, promote public safety, and deliver essential services such as healthcare. Universal broadband capabilities also can enable state and local governments to provide better and more cost efficient services. And lastly, broadband access provides opportunities for citizens, businesses and visitors to enjoy the resources available through the Internet.

## PUTTING RHODE ISLAND ON THE BROADBAND MAP

The objectives of BBRI include:

- Develop and provide a baseline assessment of broadband deployment for the state, and create a geographic inventory map of broadband service
- Identify and track the areas with low levels of deployment, and the rate at which residential and business users adopt broadband service
- Identify barriers to the adoption of broadband service and information technology services in underserved areas
- Collaborate with broadband service providers and information technology companies to encourage deployment and use
- Facilitate information exchange regarding use and demand for broadband services between public and private sector users
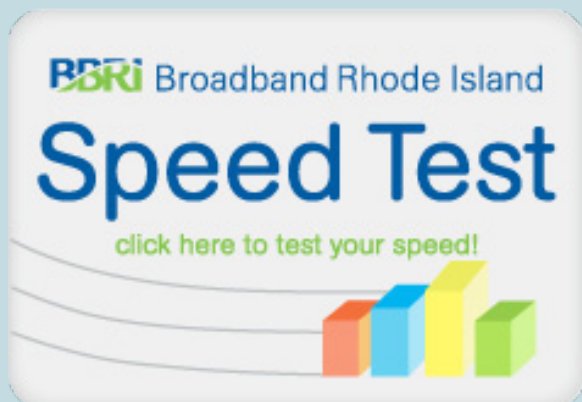
**The project components of the BBRI initiative include:**

**Project 1: State Broadband Capacity Building:** With this funding, RIEDC will create a broadband program office that will assess the barriers to broadband adoption and usage in the state. The office will benchmark the state's progress over a four-year period; develop a plan to improve broadband availability and usage in the state, utilizing input gathered through a series of community meetings over the course of the project; and create partnerships with the private and public sectors to facilitate greater broadband deployment and adoption.

**Project 2: Technical Assistance:** RIEDC, in partnership with Ocean State Libraries, will adopt a standardized digital literacy curriculum and provide relevant training to librarians and other staff across the state.

**Project 3: Application Usage and Development:** This investment will support two application development projects. In the first, RIEDC will support Rhode Island's public safety community as it begins planning for a citizen-focused online notification system. This system will create a unified and transparent source of information for Rhode Island's residents. The second project will support and document the implementation of a "virtual incubator," which supports the development of micro-entrepreneurs as they seek to incubate their businesses and access potential state resources.

**Project 4: Data Collection, Integration, and Verification:** Broadband coverage data will be collected and verified on a bi-annual basis for the entire term of the project. In addition, this project will identify and implement best practices in partnership with the NTIA as well as the 50 states and 6 territories participating in the program.
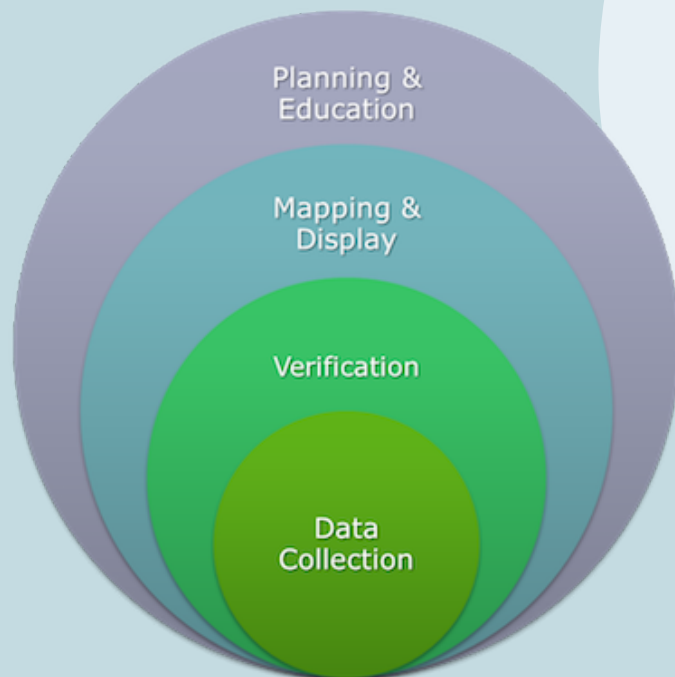
# FAST FACTS*

**Broadband data is collected by census block**

**The 2000 census identified 21,023 census blocks in RI**

**16 broadband carriers have been identified throughout RI**

**Using NTIA definitions, the data identified 91% coverage within Rhode Island excluding satellite and wireless**

**Coverage does not reflect adoption rate**

**1,171 Community Anchor Institutions (schools, hospitals, universities, libraries, fire & police stations, etc.) are in RI**

**\*RESULTS FROM OUR 2010 DATA COLLECTION**

**To Learn More, Please Visit: www.broadband.ri.gov**